



October 19, 2017

Mike Cirian, P.E.
United States Environmental Protection Agency
108 East 9th Street
Libby, Montana 59923

Re: Surficial Soil Sampling Results from Asbestos Landfills
Columbia Falls Aluminum Company, Columbia Falls, Montana

Dear Mr. Cirian:

Roux Associates, Inc. (Roux Associates), on behalf of Columbia Falls Aluminum Company (CFAC) has prepared this letter to the United States Environmental Protection Agency (USEPA) to describe the surficial soil sampling activities performed in the Asbestos Landfills as part of the Phase I Site Characterization and to summarize the analytical results of those activities.

Background

As described in the Remedial Investigation/Feasibility Study Work Plan (RI/FS Work Plan), two areas were identified as being former asbestos landfills based on historic information. The areas are referred to as the North Asbestos Landfills and the South Asbestos Landfills. The North Asbestos Landfills are located north of the West Landfill and consist of two separate areas (i.e., North-West and North-East Asbestos Landfills); the South Asbestos Landfills are located south of the East Landfill, near the eastern boundary of the Site, and also consist of two separate areas (i.e., South-West and South-East Asbestos Landfills). Together, the four landfills are referred to as the Asbestos Landfills.

The asbestos landfills were constructed as early as the late 1970s or early 1980 based upon historical records reviewed during preparation of the RI/FS Work Plan. Disposal records available in CFAC's files for the North Asbestos Landfills indicate that these landfills were in use from 1993 to 2009. Details regarding landfill construction are unknown; however, based on the Phase I observations during field reconnaissance and test pitting activities described below, the landfills have a natural soil cover that overlies the asbestos materials within the landfills. There is no evidence of an engineered cap or liner. The approximate boundaries of the landfills are presented on Plate 1. These boundaries were initially determined based upon historical aerial photograph review; and then

updated based upon observations and GPS mapping during field reconnaissance and test pitting activities.

During the Phase I Site Characterization, a test pitting investigation was performed to define the extent and contents of the Asbestos Landfills. Cascade Drilling (Cascade), under Roux Associates oversight, conducted test pitting activities from August 15 to 18, 2016 within the Asbestos Landfills. A certified asbestos inspector provided by Hydrometrics (Subcontractor to Roux Associates) was present throughout the duration of the test pit activities. The test pitting consisted of seven test pits excavated to approximately 10 feet below land surface (ft-bls) within the South Asbestos Landfill and eight test pits excavated to approximately 10 ft-bls within the North Asbestos Landfill. Asbestos containing material, including asbestos pipe and asbestos bags, were observed at depth during test pitting. No samples were collected during this investigation. The test pitting activities and the contents observed in each test pit are described in detail in the Phase I Site Characterization Data Summary Report. Based on the results of this investigation and additional Site reconnaissance, the approximate horizontal extent of the Asbestos Landfills was mapped using hand-held GPS with sub-meter accuracy, with the results used to more accurately depict the landfill locations and extents on site maps and figures.

The historical knowledge of asbestos landfill operations at the Site and previous Site reconnaissance and test pitting activities indicated that asbestos containing materials were buried in the landfills underneath a soil cover. However, it could not be determined from visual field inspection if asbestos is present in the surface soil. During a Project Update Meeting on November 3, 2016, USEPA requested that CFAC perform sampling of surface soil within the four asbestos landfills to determine the presence, or lack thereof, of asbestos in the surface soil, and the extent of the asbestos, if present. CFAC agreed to perform the sampling as requested by USEPA.

Sampling Scope of Work

Surface soil sampling at the Asbestos Landfills began on July 31, 2017 and was completed by Roux Associates, with support of Hydrometrics, on August 10, 2017, in accordance with the scope of work described in the Phase I SAP Modification #10, which was submitted to USEPA on May 24, 2017 and approved via email concurrence by USEPA on June 23, 2017. The sampling procedure is described in Roux Associates' Standard Operating Procedure (SOP) titled, "Standard Operating Procedure 5.13 for Collection of Composite Soil Samples for Laboratory Analysis of Asbestos via CARB 435."

A total of 56 grid cells were sampled across the four landfills as presented in the attached Plate 1. As requested by USEPA, the sampling was conducted at the frequency of 30 surface soil sub-samples per grid cell (approximately 3,000 square feet per cell). The 30 locations were randomly distributed using the random distribution function in ArcGIS and field personnel utilized a hand-held GPS (with submeter accuracy) to navigate to each location for sample collection. At each of the 30 locations

within a grid, a sub-sample of soil of approximately 100 grams was collected from the surface (0-0.5 ft-bls) using a stainless-steel trowel and placed in a Ziploc bag.

During the sampling activities, the landfill surface around each sampling location was inspected for any evidence of potential ACM (including, but not limited to building materials, piping/conduits, etc.), so that, if encountered, such materials could also be sampled. A wire with insulation was identified by Hydrometrics (State of Montana certified asbestos inspector) as potential ACM and was collected for asbestos analysis from the surface of grid CFAS-55 in the southeast corner of the North-East asbestos landfill. This sample was collected separately from the underlying soil sample collected in grid cell CFAS-55.

A total of 56 soil samples were sent to TestAmerica, Inc's EMLab P&K laboratory in Arvada, Colorado for laboratory analysis. Surficial soil samples were analyzed via the California Air Resources Board (CARB) 435 method using polarized light microscopy (PLM). As part of the preparation for the CARB 435 analysis, the laboratory homogenized the 30 soil sub-samples for each grid to be analyzed as one composite sample. The preparation and laboratory procedures for the CARB 435 analysis is described in the laboratory SOP titled "Asbestos Analysis in Soils and Rock: CARB 435 using PLM," submitted with Phase I SAP Modification #10. The wire sample collected from grid CFAS-55 was also sent to the TestAmerica EMLab P&K laboratory and analyzed for EPA Method 600 using PLM.

Laboratory Analytical Results

The laboratory analytical data for the 56 surficial soil samples collected from the 56 grids across the Asbestos Landfills are summarized in Table 1. The analytical data for the potential ACM wire sample collected during the investigation is summarized in Table 2. Analytical data for surficial soils were compared to the laboratory method detection limit.

The surficial soil sampling results from the Asbestos Landfills indicate the following:

- Surficial soil was non-detect for asbestos in 55 of the 56 surficial soil samples collected from the Asbestos Landfills based upon the asbestos concentration. Point counting was not performed on these samples because no asbestos fibers were detected.
- One surficial soil sample, CFAS-03-SO-0-0.5, had a chrysotile asbestos concentration less than 0.25% but there were no asbestos fibers identified for counting during the point count. This sample was collected from grid CFAS-03 located in the northeast corner of the south-west asbestos landfill.
- One potential ACM sample, CFAS-55-Wire, had an asbestos concentration of 90% chrysotile asbestos. The surficial soil sample collected from the same grid cell, CFAS-55-SO-0-0.5, was determined to be non-detect for asbestos.

The results from the surficial soil sampling conducted at each landfill will be considered and further evaluated during development of the Human Health Baseline Risk Assessment Work Plan.

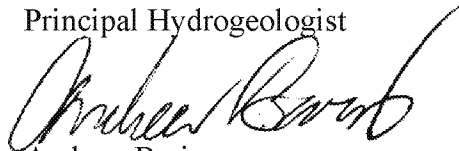
Sincerely,

ROUX ASSOCIATES, INC.



Michael Ritorto

Principal Hydrogeologist



Andrew Baris

Principal Hydrogeologist/

Vice President

Enclosures:

Table 1 – Asbestos in Surficial Soil Samples from Asbestos Landfill Sampling Locations

Table 2 – Asbestos in Asbestos Containing Material Sample from Asbestos Landfill Sampling Locations

Plate 1 – Asbestos Landfill Surface Soil Sampling Locations

cc: John Stroiazzo, Glencore
Steve Wright, Columbia Falls Aluminum Company
Lisa DeWitt, Montana Department of Environmental Quality
Richard Sloan, Montana Department of Environmental Quality

Surficial Soil Sampling Results from Asbestos Landfills
Columbia Falls Aluminum Company, Columbia Falls, Montana

TABLES

1. Asbestos in Surficial Soil Samples from Asbestos Landfill Sampling Locations
2. Asbestos in Asbestos Containing Material Sample from Asbestos Landfill Sampling Locations

Table 1. Asbestos in Surficial Soil Samples from Asbestos Landfill Sampling Locations**Columbia Falls Aluminum Company, LLC, Phase I Site Characterization, 2000 Aluminum Drive, Columbia Falls, MT**

Location:	CFAS-01-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8281005-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Gray Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-02-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8281006-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Gray Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-03-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8281007-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Gray Soil	Chrysotile	0	< 0.25
Layer Totals:		0	NA

Comments: Asbestos was detected, but no points counted.

Location:	CFAS-04-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8281008-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Tan Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-05-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8281009-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Gray Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Table 1. Asbestos in Surficial Soil Samples from Asbestos Landfill Sampling Locations**Columbia Falls Aluminum Company, LLC, Phase I Site Characterization, 2000 Aluminum Drive, Columbia Falls, MT**

Location:	CFAS-06-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8281010-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Tan Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-07-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8281011-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Tan Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-08-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8281012-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Tan Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-09-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8281013-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Tan Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-10-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8281014-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Tan Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Table 1. Asbestos in Surficial Soil Samples from Asbestos Landfill Sampling Locations**Columbia Falls Aluminum Company, LLC, Phase I Site Characterization, 2000 Aluminum Drive, Columbia Falls, MT**

Location:	CFAS-11-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8281015-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Tan Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-12-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8281016-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Tan Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-13-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8281017-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Tan Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-14-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8296116-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-15-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8296110-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Table 1. Asbestos in Surficial Soil Samples from Asbestos Landfill Sampling Locations**Columbia Falls Aluminum Company, LLC, Phase I Site Characterization, 2000 Aluminum Drive, Columbia Falls, MT**

Location:	CFAS-16-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8296105-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-DUP3-SO (CFAS-16- SO-0-0.5)		
Total Points Counted:	400		
Lab ID-Version :	8296109-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-17-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8281034-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Tan Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-18-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8296121-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-19-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8296111-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Table 1. Asbestos in Surficial Soil Samples from Asbestos Landfill Sampling Locations**Columbia Falls Aluminum Company, LLC, Phase I Site Characterization, 2000 Aluminum Drive, Columbia Falls, MT**

Location:	CFAS-20-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8296104-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-21-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8296106-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-22-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8281035-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Tan Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-23-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8296120-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-24-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8296112-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Table 1. Asbestos in Surficial Soil Samples from Asbestos Landfill Sampling Locations**Columbia Falls Aluminum Company, LLC, Phase I Site Characterization, 2000 Aluminum Drive, Columbia Falls, MT**

Location:	CFAS-25-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8296103-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-26-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8296101-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-27-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8296095-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-28-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8296119-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-30-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8296102-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Table 1. Asbestos in Surficial Soil Samples from Asbestos Landfill Sampling Locations**Columbia Falls Aluminum Company, LLC, Phase I Site Characterization, 2000 Aluminum Drive, Columbia Falls, MT**

Location:	CFAS-31-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8296100-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-32-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8296096-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-36-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8296099-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-37-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8296097-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-38-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8296117-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Table 1. Asbestos in Surficial Soil Samples from Asbestos Landfill Sampling Locations**Columbia Falls Aluminum Company, LLC, Phase I Site Characterization, 2000 Aluminum Drive, Columbia Falls, MT**

Location:	CFAS-40-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8296098-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-41-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8296107-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-42-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8281033-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Tan Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-43-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8281028-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Tan Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-44-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8281025-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Tan Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Table 1. Asbestos in Surficial Soil Samples from Asbestos Landfill Sampling Locations**Columbia Falls Aluminum Company, LLC, Phase I Site Characterization, 2000 Aluminum Drive, Columbia Falls, MT**

Location:	CFAS-45-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8281023-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Tan Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-46-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8281032-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Tan Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-47-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8281027-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Tan Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-48-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8281024-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Tan Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-49-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8281030-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Tan Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Table 1. Asbestos in Surficial Soil Samples from Asbestos Landfill Sampling Locations**Columbia Falls Aluminum Company, LLC, Phase I Site Characterization, 2000 Aluminum Drive, Columbia Falls, MT**

Location:	CFAS-50-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8286004-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Tan Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-51-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8281022-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Tan Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-52-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8281021-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Tan Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-53-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8281029-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Tan Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-DUP2-SO (CFAS-53- SO-0-0.5)		
Total Points Counted:	400		
Lab ID-Version :	8281031-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Tan Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Table 1. Asbestos in Surficial Soil Samples from Asbestos Landfill Sampling Locations**Columbia Falls Aluminum Company, LLC, Phase I Site Characterization, 2000 Aluminum Drive, Columbia Falls, MT**

Location:	CFAS-54-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8281026-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Tan Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-55-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8281020-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Tan Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-56-SO-0-0.5		
Total Points Counted:	400		
Lab ID-Version :	8281018-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Tan Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

Location:	CFAS-DUP1-SO (CFAS-56- SO-0-0.5)		
Total Points Counted:	400		
Lab ID-Version :	8281019-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Tan Soil	-	-	ND
Layer Totals:		-	-

Comments: Point counting as stated under "Total Points Counted" was not performed as no asbestos fibers were detected.

EMLab P&K, LLC
EMLab Id: 1771895

Table 2. Asbestos in Asbestos Containing Material Sample from Asbestos Landfill Sampling Locations
Columbia Falls Aluminum Company, LLC, Phase I Site Characterization, 2000 Aluminum Drive, Columbia Falls, MT

Sample ID	Sample Layers	Asbestos Concentration	Asbestos Content	Composite Non-Asbestos Content
CFAS-55-Wire	Off-White Wiring Insulation	90%	Chrysotile	
CFAS-55-Wire	Composite Non-Asbestos Content			7% Synthetic Fibers

EMLab P&K, LLC
EMLab Id: 1775235

Surficial Soil Sampling Results from Asbestos Landfills
Columbia Falls Aluminum Company, Columbia Falls, Montana

PLATE

1. Asbestos Landfill Surface Soil Sampling Locations



LEGEND

- RANDOMLY GENERATED SOIL SAMPLE LOCATIONS
- SAMPLING GRID LESS THAN 3,000 SQ FT AND GRID DESIGNATION

NOTES

1. EACH GRID CONTAINS 30 SUB SAMPLES TO COMPRISE ONE COMPOSITE SAMPLE
2. COMPOSITE SAMPLE WAS NAMED WITH THE FOLLOWING EXAMPLE NOMENCLATURE:
CFAS-01-SO-0-0.5

50 0 50 Feet

Title: ASBESTOS LANDFILL SURFACE SOIL SAMPLING LOCATIONS 2000 ALUMINUM DRIVE COLUMBIA FALLS, MONTANA			
Prepared For: COLUMBIA FALLS ALUMINUM COMPANY, LLC			
 ROUX ASSOCIATES, INC. Environmental Consulting & Management	Compiled by: M.R.	Date: 17OCT17	PLATE 1
	Prepared by: M.R.	Scale: AS SHOWN	
	Project Mgr: M.R.	Project: 2476.0001Y002	
File: 2476.0001Y185.1.mxd			